

Figure 1

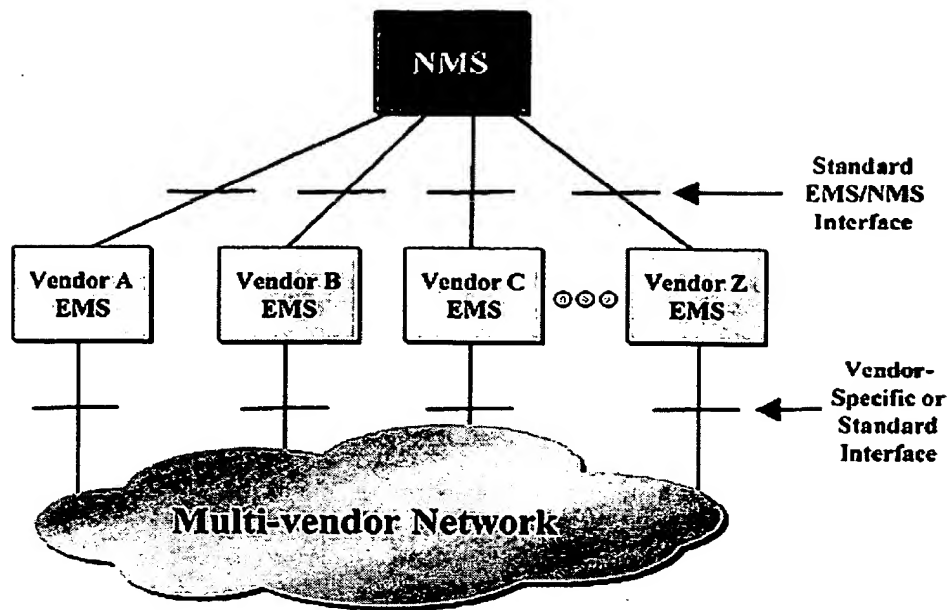


Figure 1A
Prior Art

BML- Manage the overall business,
e.g., achieving return on investment, market
share, employee satisfaction, community
and governmental goals.

SML- Manage the services offered to customers.
e.g., meeting customer service levels,
service quality, cost and
time-to-market objectives.

NML- Manage the network and systems that
deliver those services, e.g., capacity,
diversity, and congestion.

EML- Manage the elements comprising
the networks and systems.

NEL- Switches, transmission,
distribution systems, etc...

Business Management Layer

Service Management Layer

Network Management Layer

Network Element Management Layer

Network Element Layer

Figure 1B
Prior Art

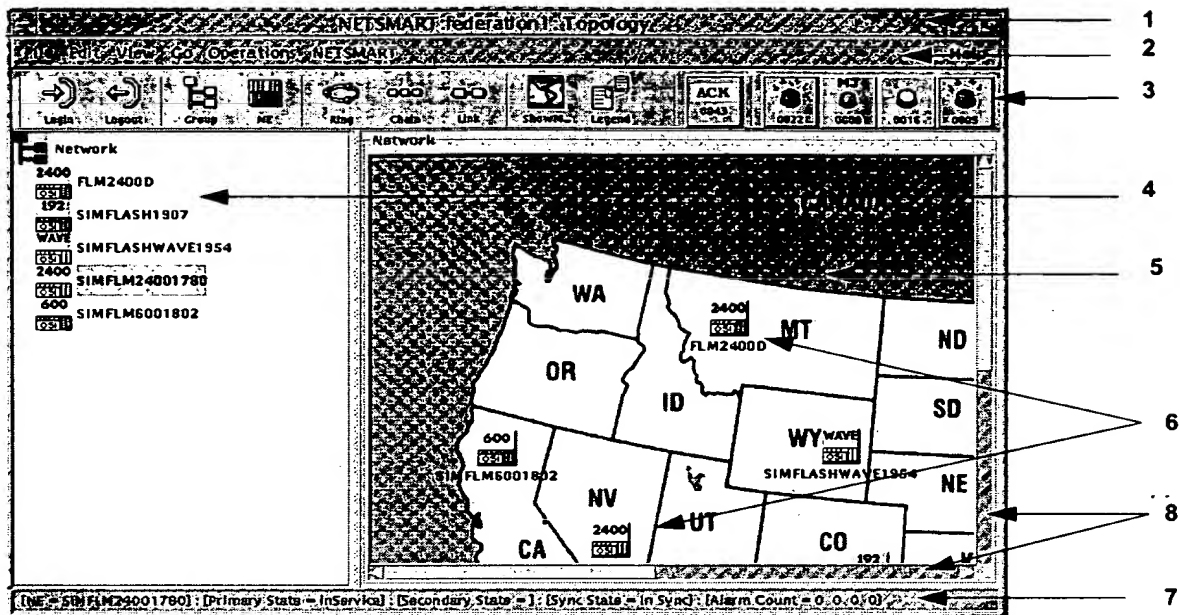


Figure 2

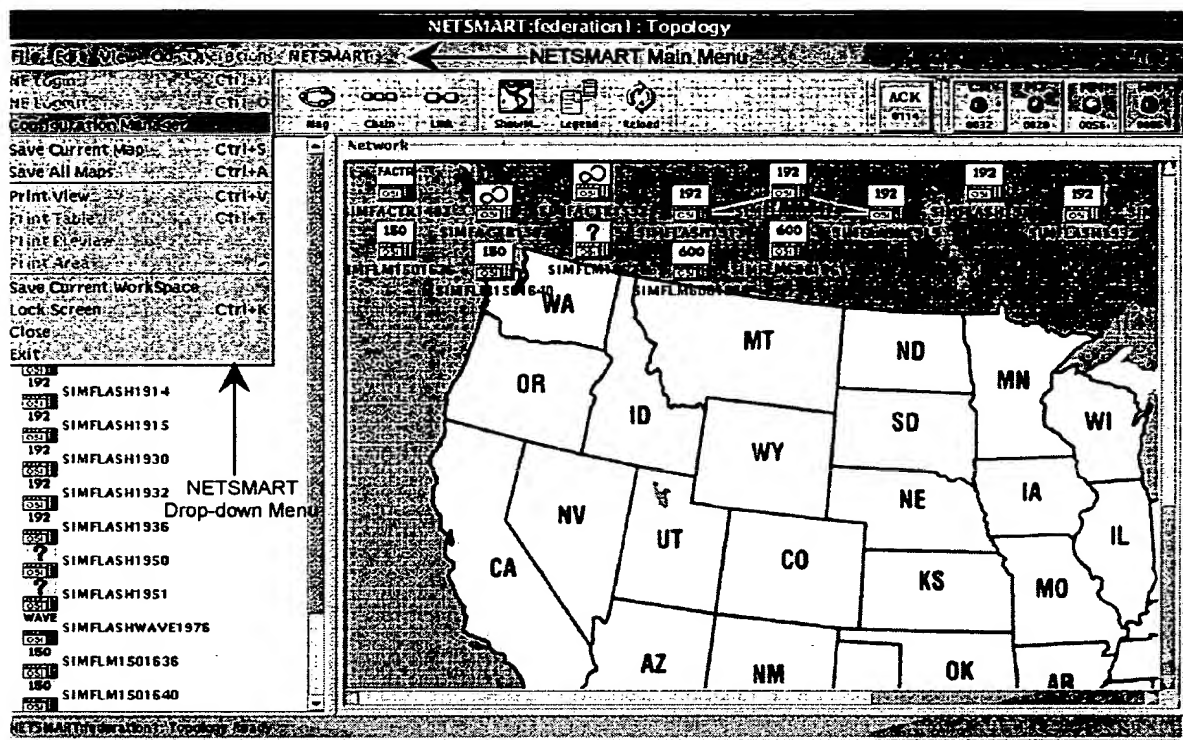


Figure 3

Filter			
Field	Test	Value	Logic
(none)	(none)	Text/Data Entry Field	AND
(none)	(none)		AND
Wavelength (nm)	(none)		AND
Frequency (THz)	(none)		AND
Transponder or 10G-Port	(none)		AND
AD	(none)		AND
Status	(none)		AND
OCN-WLR (nm)	(none)		AND
OCN-OPR (dBm)	(none)		AND
WCH-OPR (dBm)	(none)		AND
WDM-OPR (dBm)	(none)		AND
WDM-OPR (dBm)	(none)		AND
(none)	(none)		AND
(none)	(none)		AND
(none)	(none)		AND

Figure 4

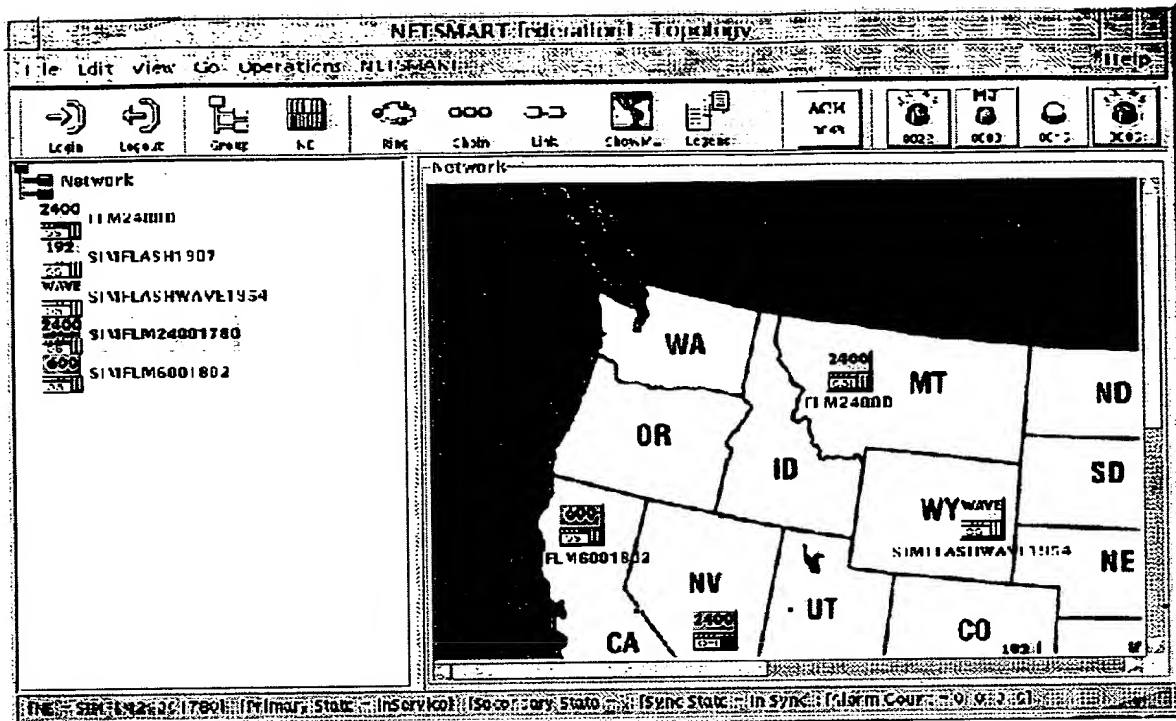


Figure 5

Add Link

Group 1: Search Search

Group 2: Search Search

Linkable Termination Ports:

SIMFLASHWAVE1951

OCN	OS1-OCN-1	<input type="button" value="TX"/>	<input type="button" value="RX"/>
OCN	OS1-OCN-11	<input type="button" value="TX"/>	<input type="button" value="RX"/>
OCN	OS1-OCN-14	<input type="button" value="TX"/>	<input type="button" value="RX"/>
OCN	OS1-OCN-15	<input type="button" value="TX"/>	<input type="button" value="RX"/>
OCN	OS1-OCN-18	<input type="button" value="TX"/>	<input type="button" value="RX"/>
OCN	OS1-OCN-2	<input type="button" value="TX"/>	<input type="button" value="RX"/>

SIMFLASHWAVE1957

<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-1	OCN
<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-11	OCN
<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-14	OCN
<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-15	OCN
<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-18	OCN
<input type="button" value="RX"/>	<input type="button" value="TX"/>	OS1-OCN-2	OCN

Unlink

Figure 7

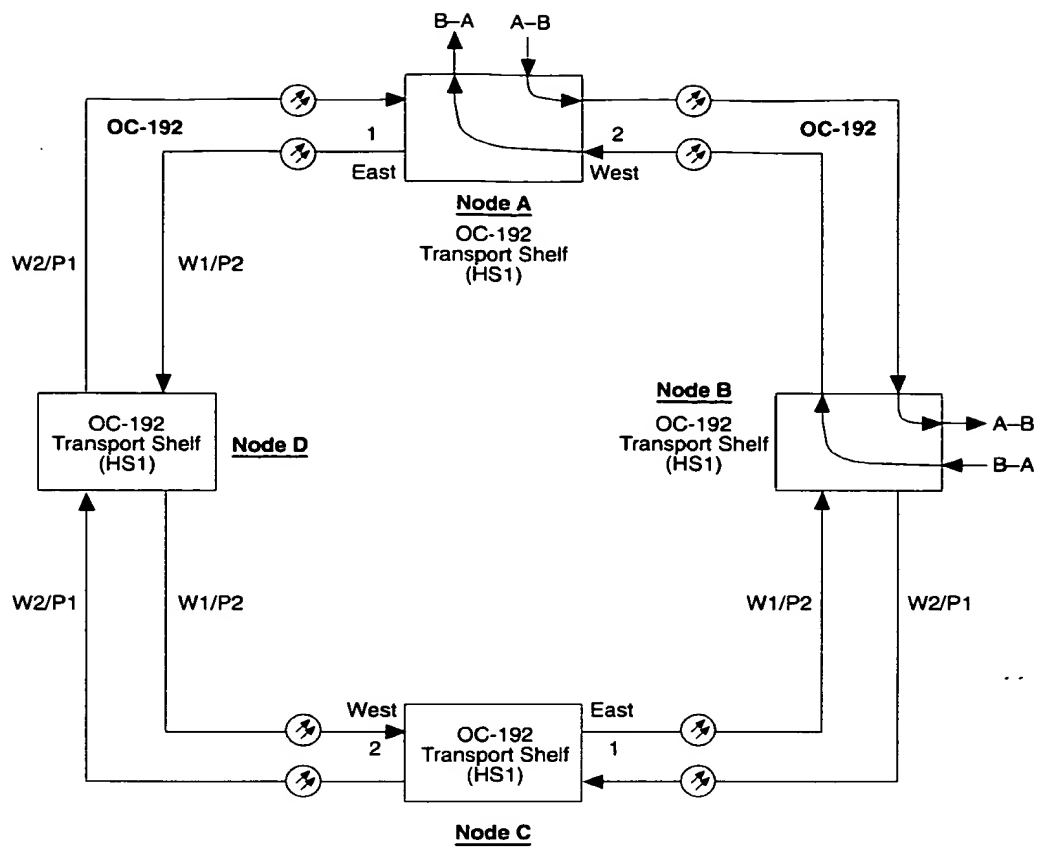


Figure 9

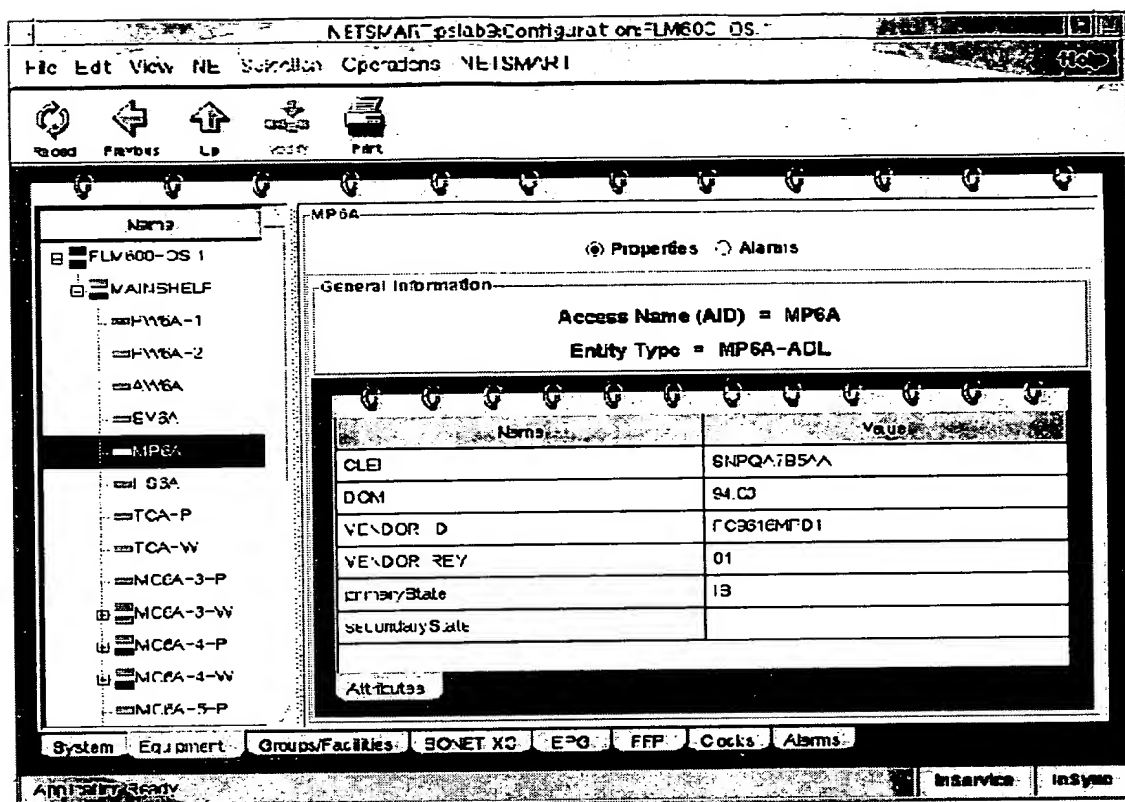


Figure 11

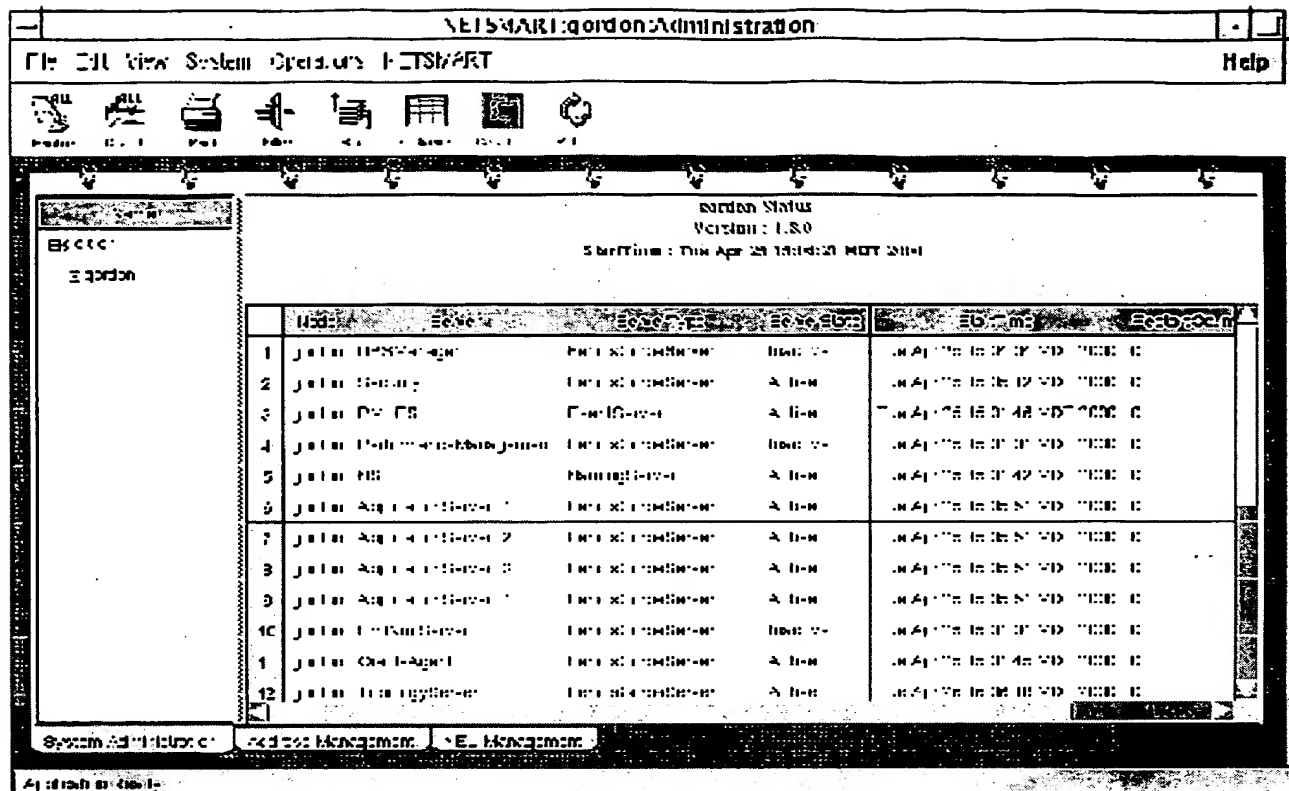


Figure 12

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Figure 13

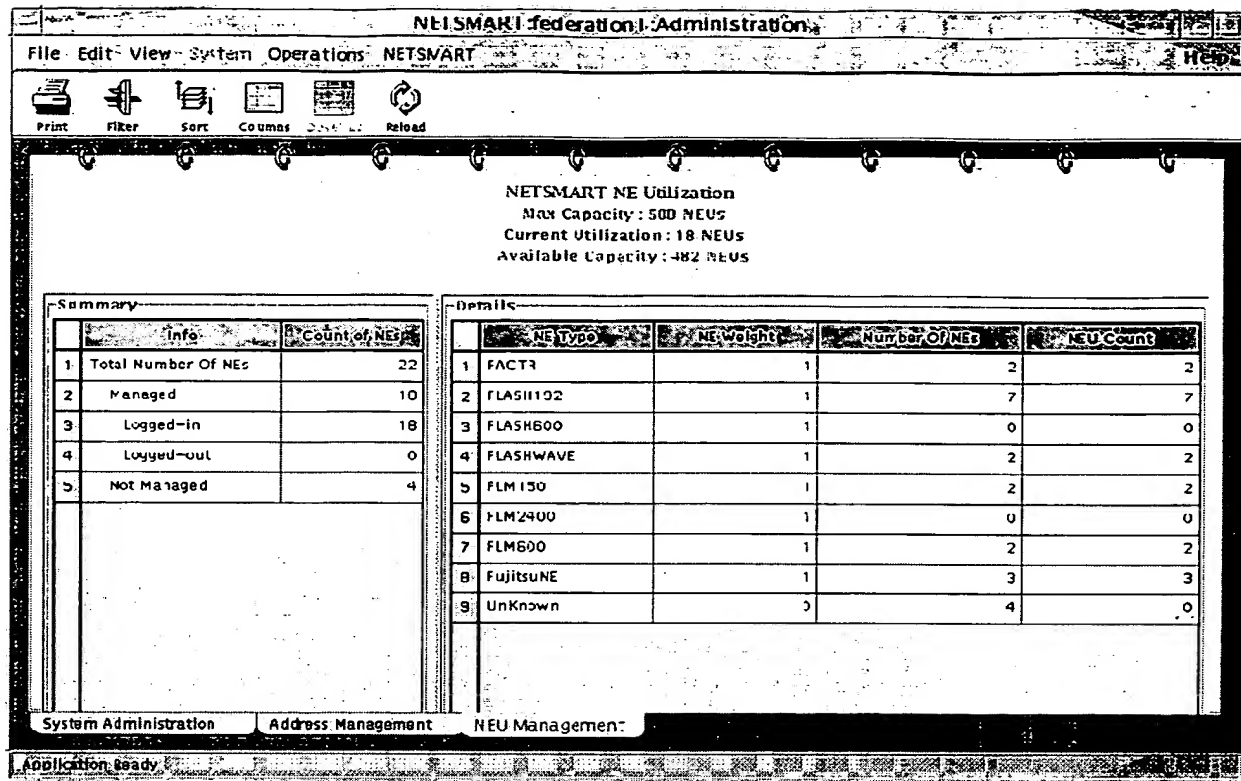


Figure 15

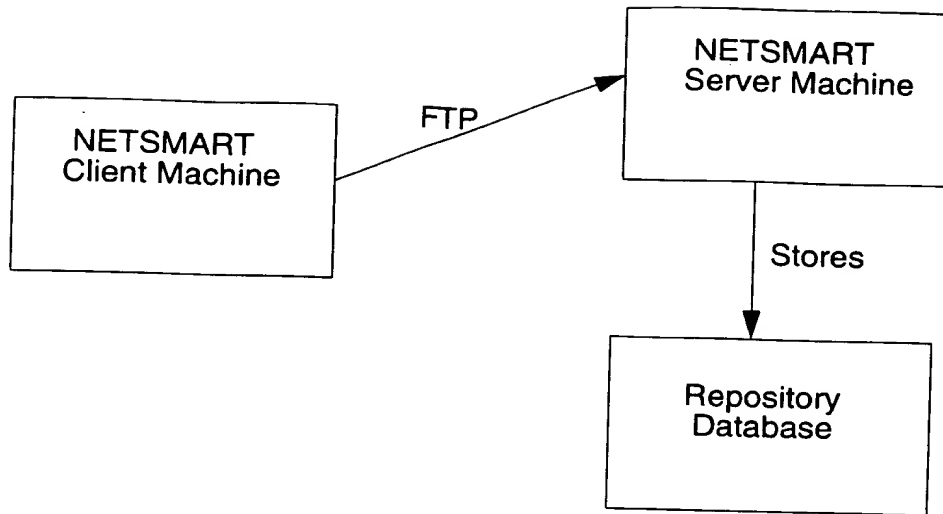


Figure 16

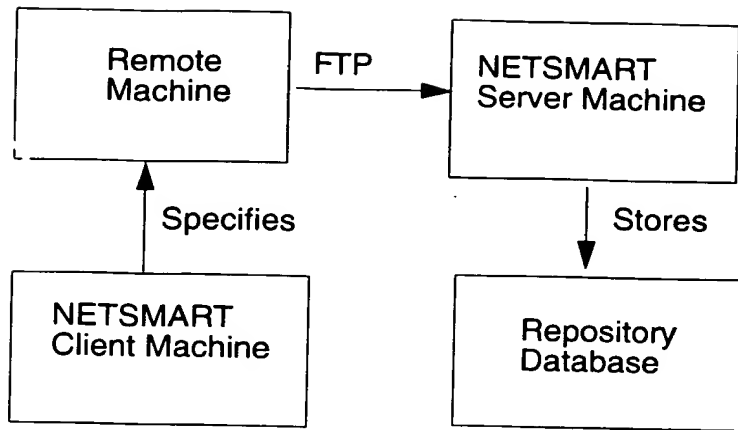


Figure 17

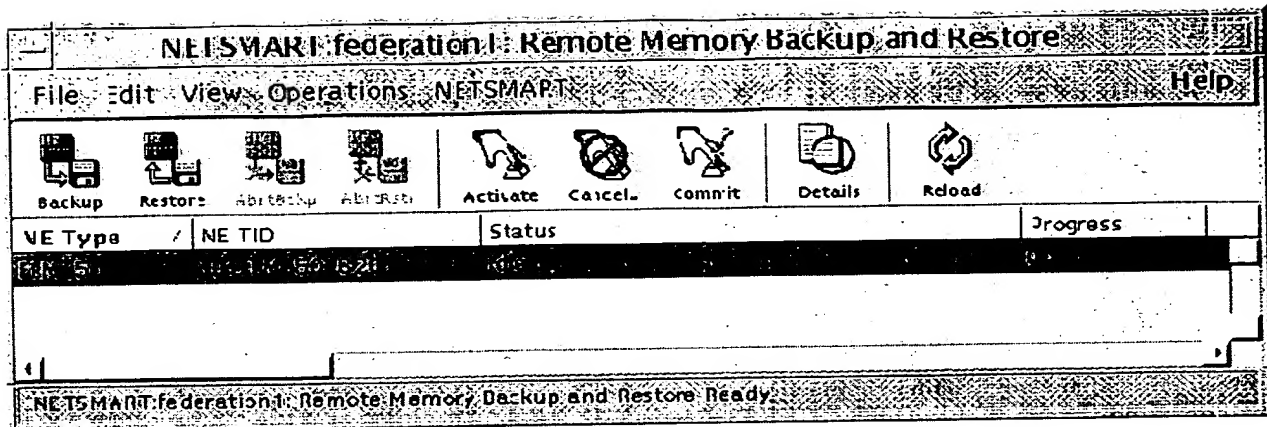


Figure 18

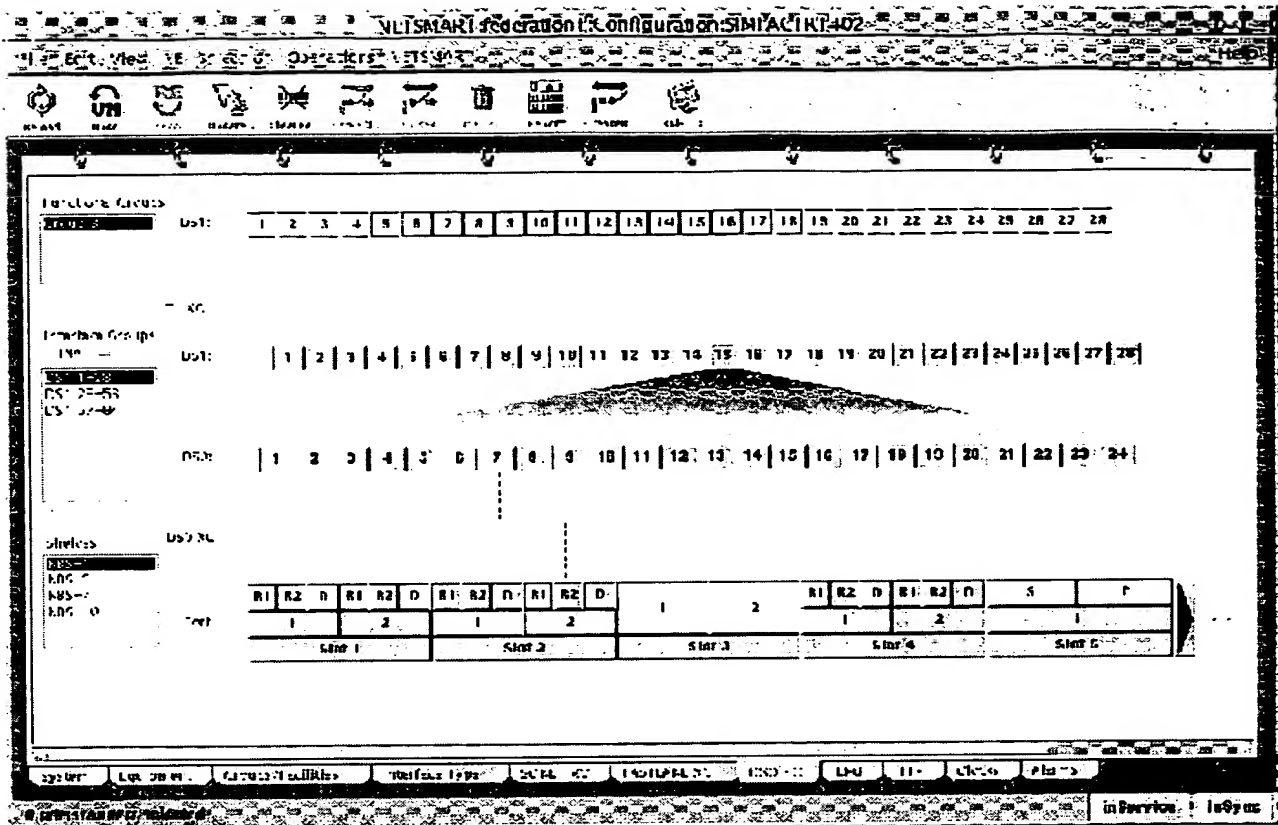


Figure 19

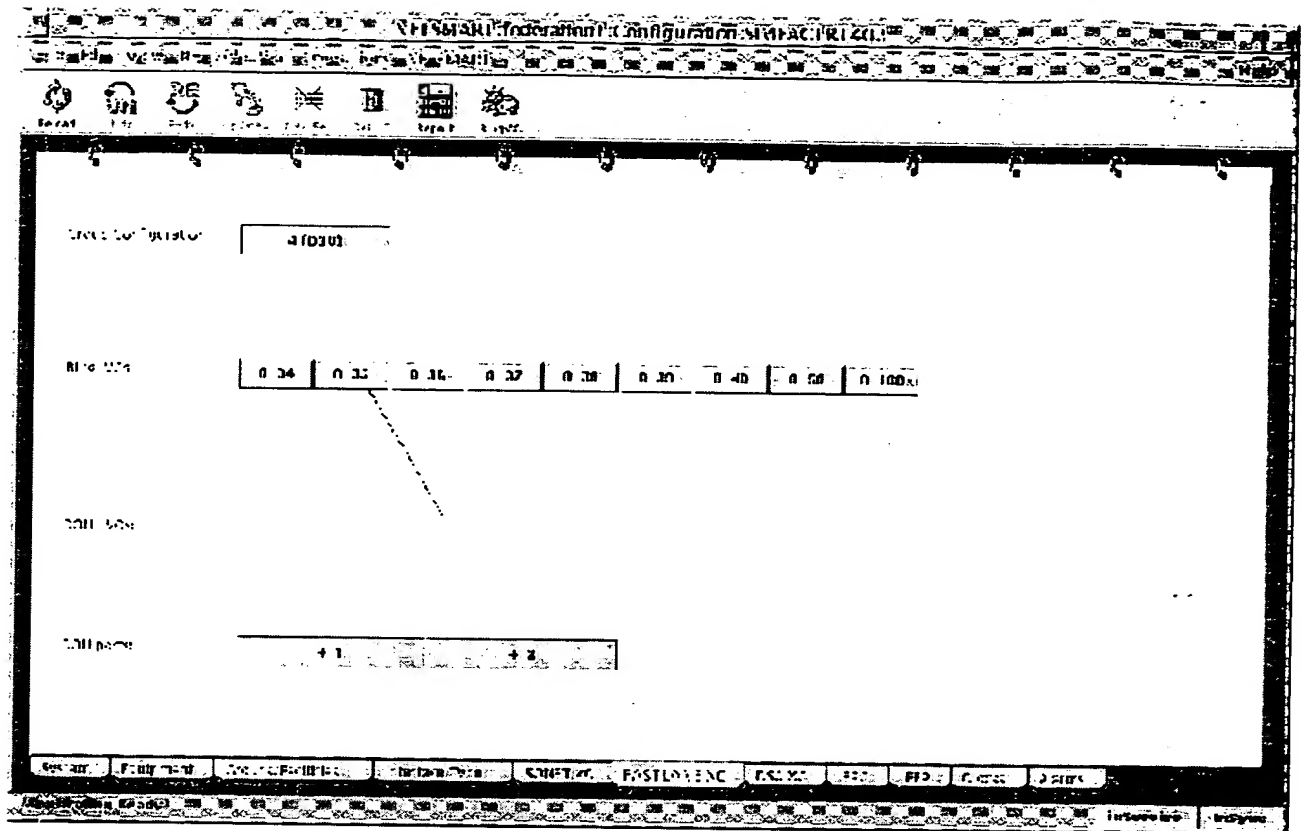


Figure 20

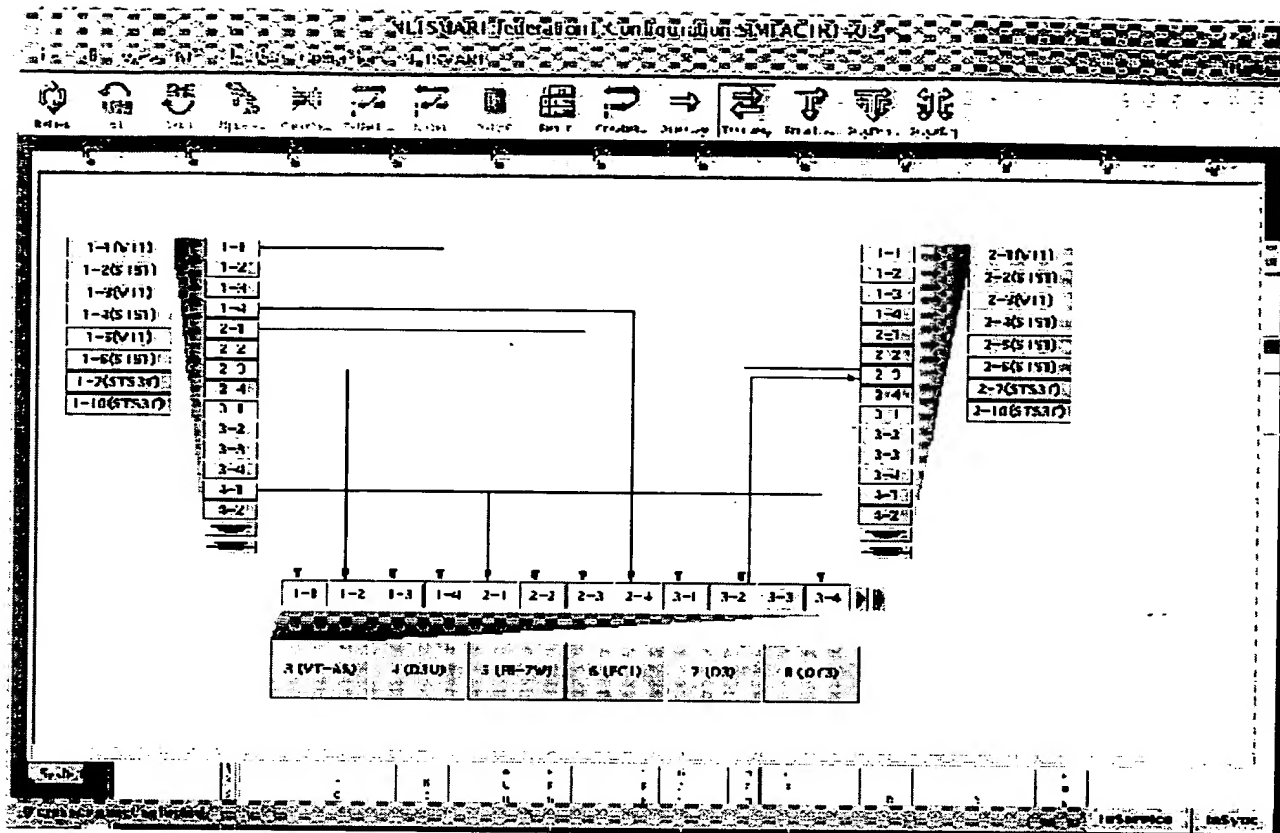


Figure 21

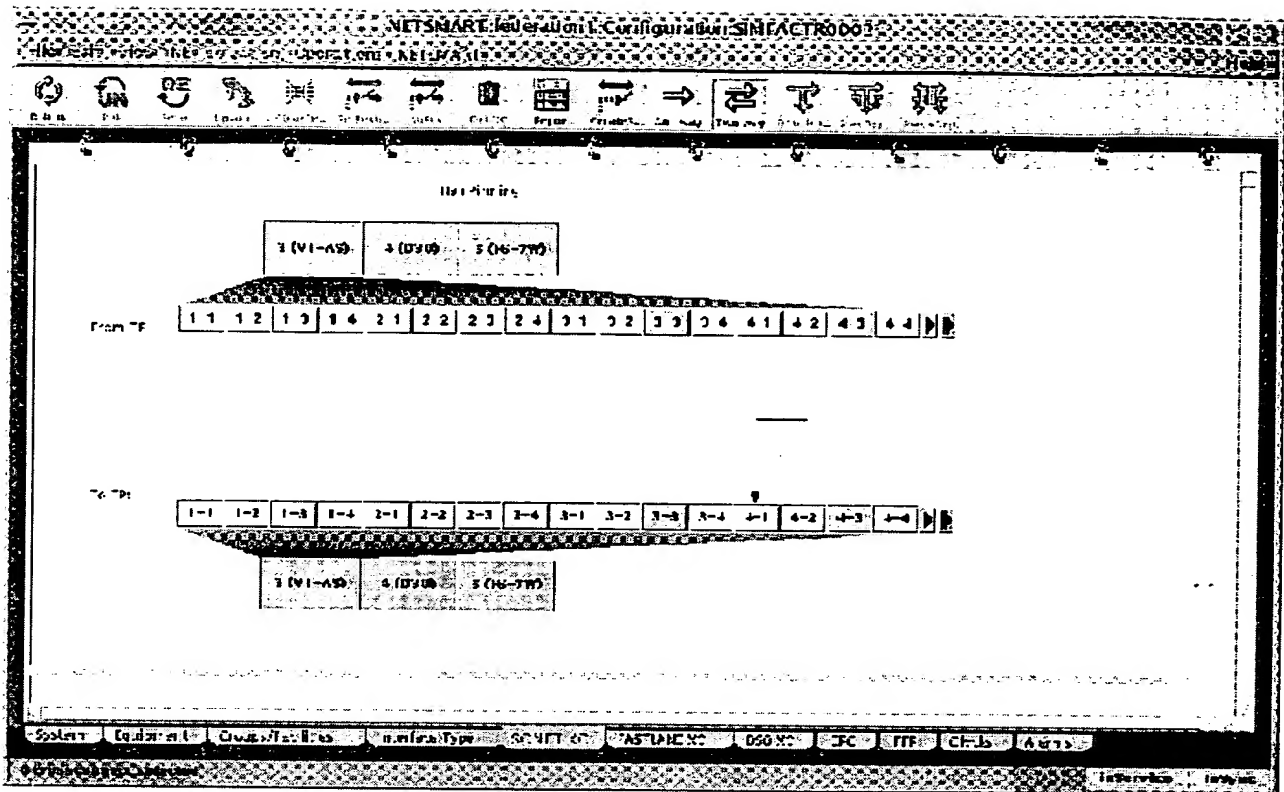


Figure 22

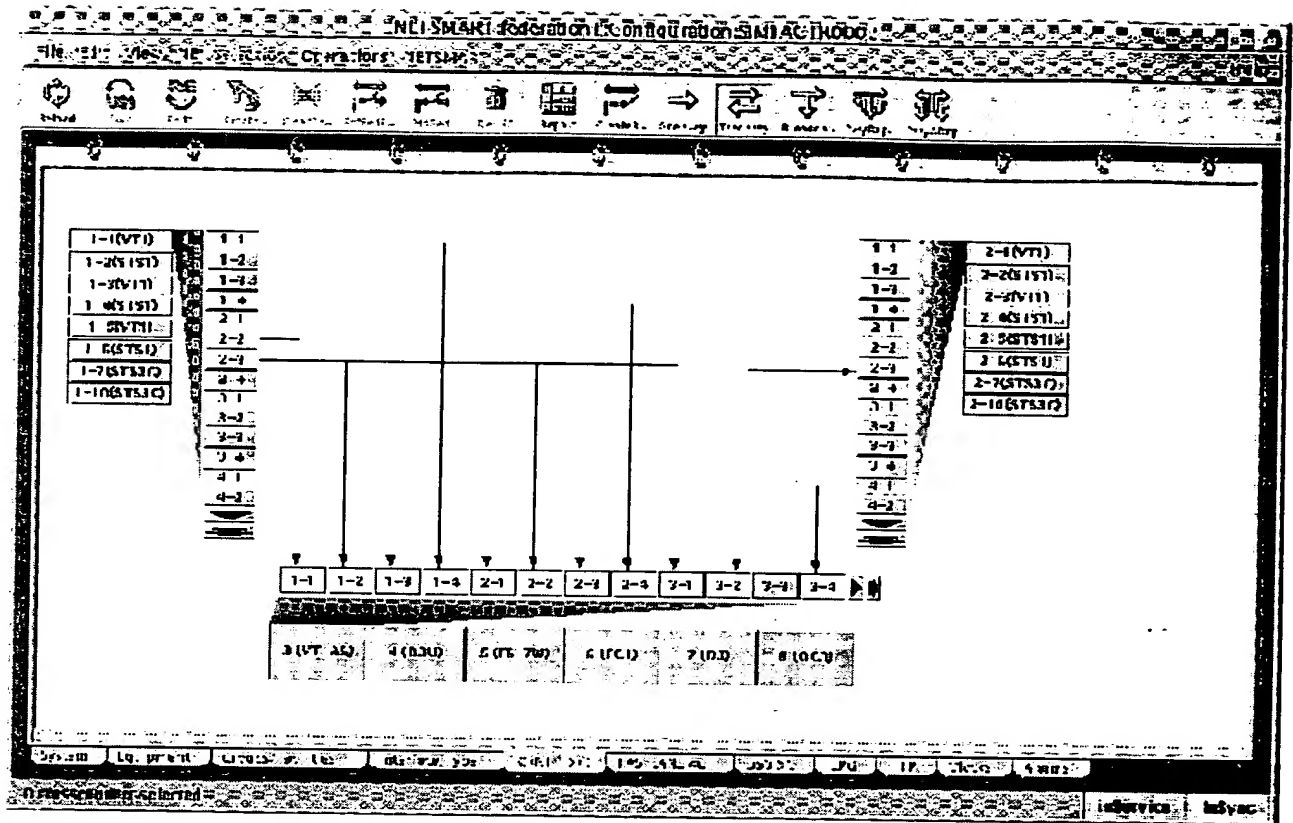


Figure 23







Crossconnect Report							
<div>       </div> <div> PrintFilterSortColumnsDeselectReload </div>							
	From	To	Rate	Redline	Bridge	Crossconnect Name	Crossconnect Type
1	2-3-2-4	1-3-2-4	VT1	No			1WAY
2	1-3-1-1	2-3-1-1	VT1	No			1WAY
3	1-3-1-3	2-3-1-3	VT1	No			1WAY
4	1-3-2-4	2-3-2-4	VT1	No			1WAY
5	2-3-1-1	1-3-1-1	VT1	No			1WAY
6	2-3-1-3	1-3-1-3	VT1	No			1WAY
7	1-2	2-2	STS1	No			1WAY
8	2-2	1-2	STS1	No			1WAY
<div>CloseHelp</div>							

Figure 24

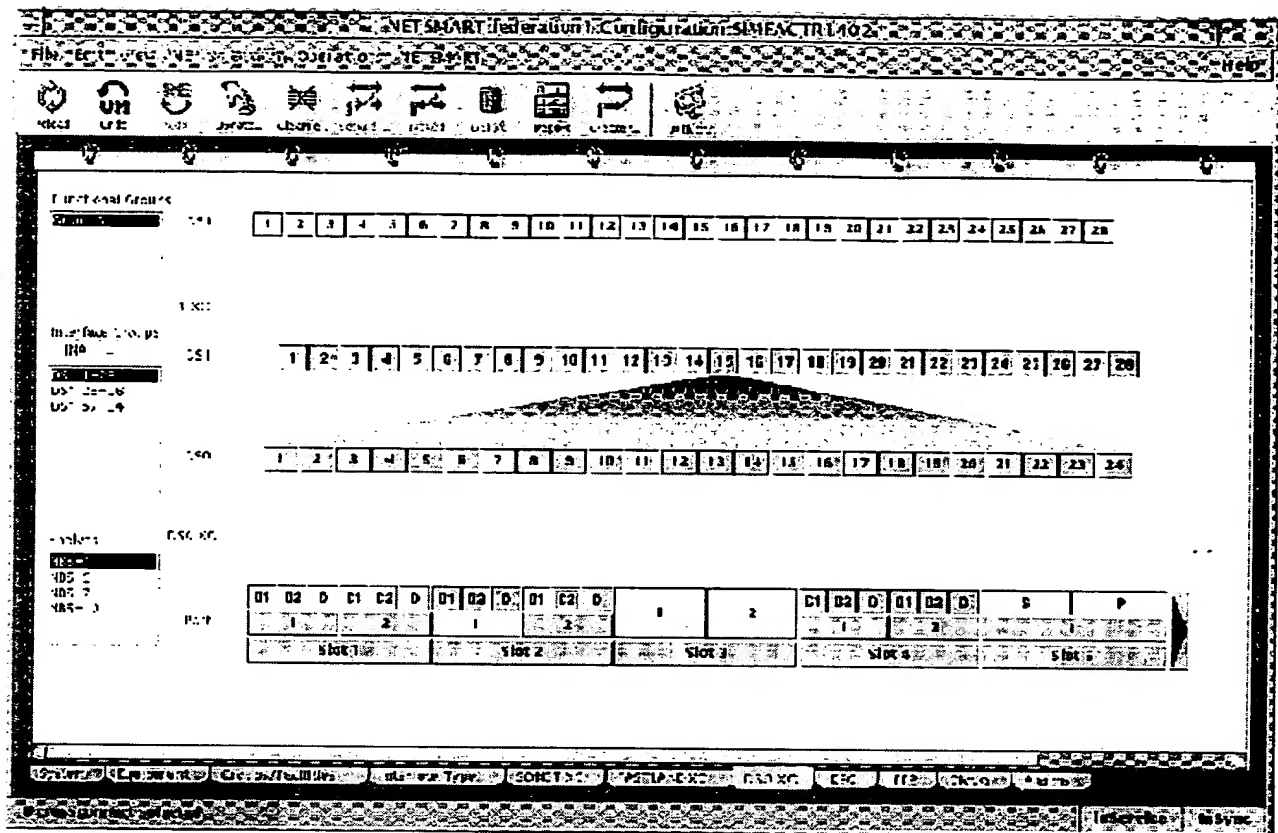


Figure 25





Managing Facilities											
<div>  Close  Delete  Delete  Reload </div>											
Rate: <u>OCN</u> Shelf: <u>OS1</u>											
Existing Facilities	Non-existing Facilities										
OS1-OCN-1	OS1-OCN-4										
OS1-OCN-2	OS1-OCN-7										
OS1-OCN-3	OS1-OCN-10										
OS1-OCN-5	OS1-OCN-12										
OS1-OCN-6	OS1-OCN-13										
OS1-OCN-8	OS1-OCN-17										
OS1-OCN-9	OS1-OCN-18										
OS1-OCN-11	OS1-OCN-19										
OS1-OCN-14	OS1-OCN-20										
OS1-OCN-15	OS1-OCN-21										
OS1-OCN-16	OS1-OCN-22										
Access Name (AID) = OS1-OCN-1 Entity Type = OCN											
<table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>OPTADJ</td> <td>+0.0</td> </tr> <tr> <td>RATE</td> <td>10G</td> </tr> <tr> <td>primaryState</td> <td>IS-NR</td> </tr> <tr> <td>secondaryState</td> <td></td> </tr> </tbody> </table>		Name	Value	OPTADJ	+0.0	RATE	10G	primaryState	IS-NR	secondaryState	
Name	Value										
OPTADJ	+0.0										
RATE	10G										
primaryState	IS-NR										
secondaryState											
Attributes											

Figure 26

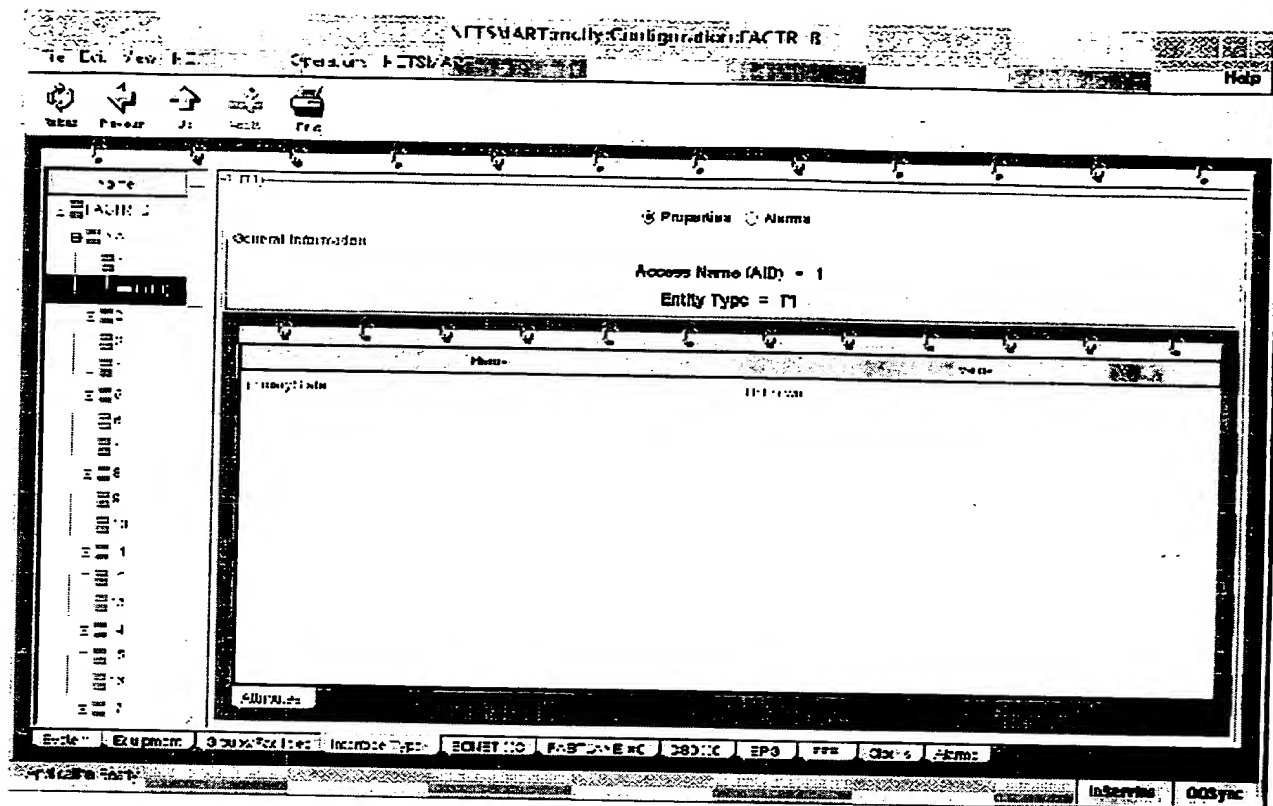


Figure 27

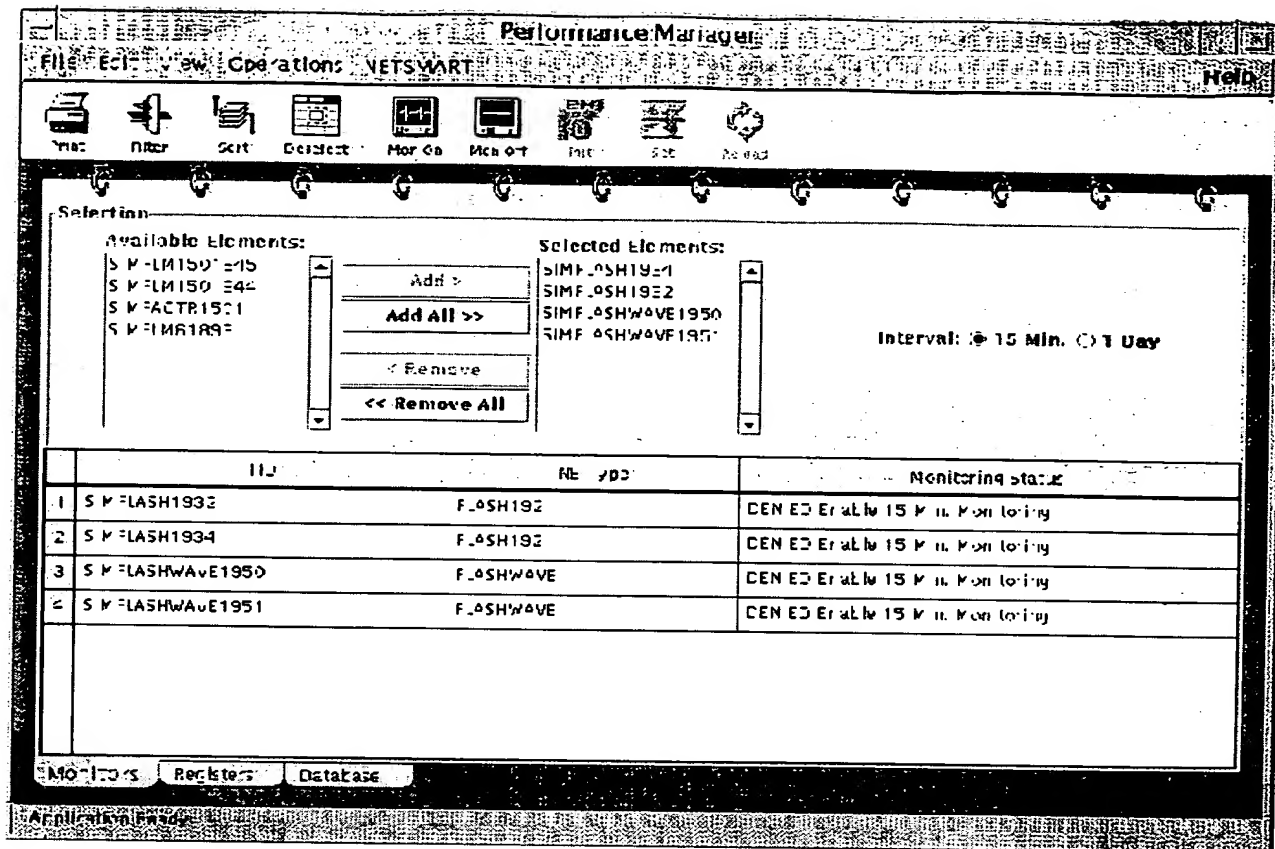


Figure 28

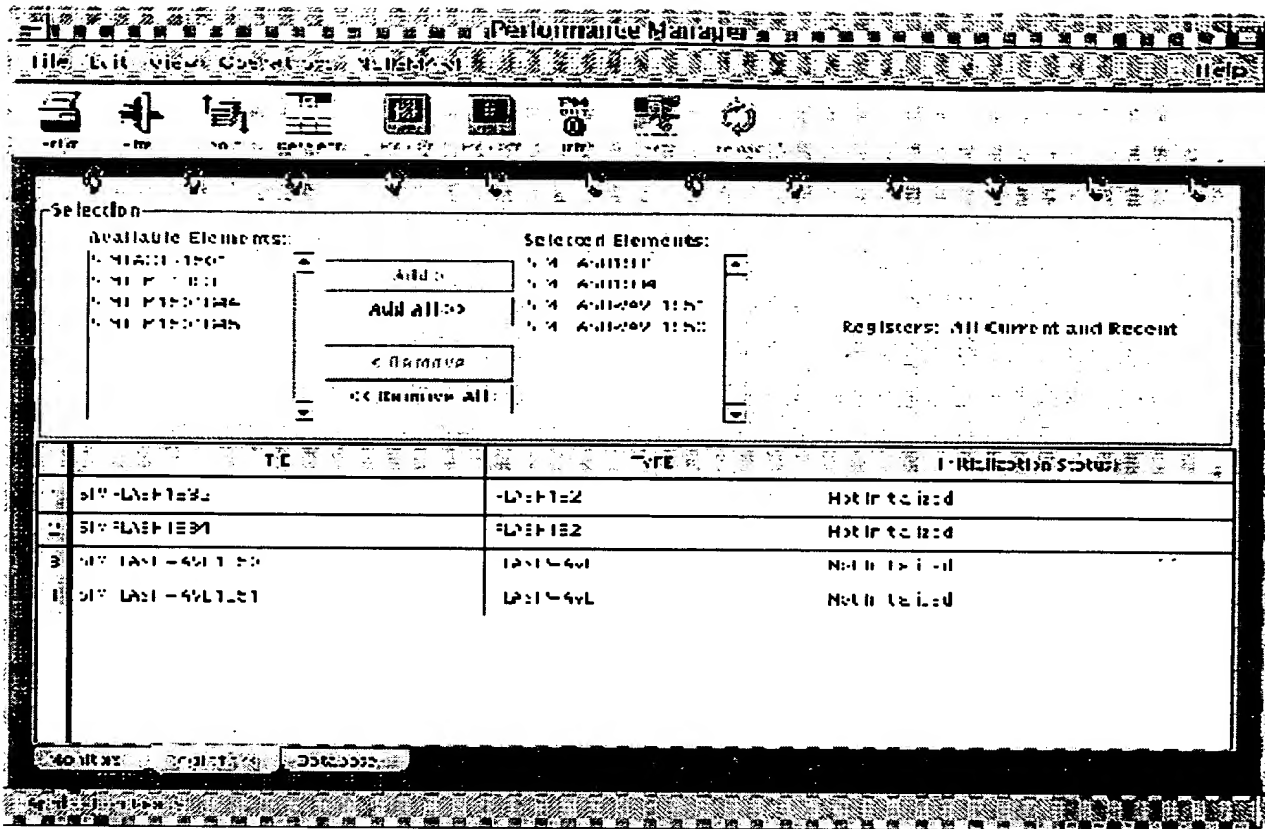


Figure 29

HS1-H12H-2

HS1-H12H-2

Selection

Available Equipment:

Selected Equipment:

Add

Add All

Remove

Remove All

	NYS Time	NE Time	A DTYPE	AID	Regist. Value	Range	Threshold
1	Fri Feb 11 14:58:35 EST 2000	Fri Feb 11 14:58:03 PST 2000	EQF	HS1-H12H-2	IRCN	1.0	1.2-1.8 1.5
2	Fri Feb 11 14:58:35 EST 2000	Fri Feb 11 14:58:03 PST 2000	EQF	HS1-H12H-2	IPTN	1.0	0.2-0.8 0.5

Monitors

Registers

Databases

Figure 31

H51-2 (OC192)

CIMP
 F-OUT
 F-INT
 NET
 LIPRINT
 DATABASE
 HELP
 EXIT
 REFRESH

CIMP
 F-OUT
 F-INT
 NET
 LIPRINT
 DATABASE
 HELP
 EXIT
 REFRESH

H51-2 (OC192)

Selection

Available facilities:

Selected facilities:

Location: ☒ NEND ☐ FEND ☐ NEND&FEND

Direction: ☒ Relative ☐ NA

Interval: ☒ 15 Min. ☐ 1 Day

Start Index:

End Index:

Add

Add All

Remove

Remove All

NNS Time	NE Time	AIDTYPE	AID	Register	Value	Range	Threshold	Default Threshold	Validity	Location	Direction

Utilities

Registers

Database

Figure 32







Crossconnect Report							
<div>  Print  Filter  Sort  Columns  Deselect  Reload </div>							
	From	To	Rate	Redline	Bridge	Crossconnect Name	Crossconnect Type
1	2-3-2-4	1-3-2-4	VT1	No			1WAY
2	1-3-1-1	2-3-1-1	VT1	No			1WAY
3	1-3-1-3	2-3-1-3	VT1	No			1WAY
4	1-3-2-4	2-3-2-4	VT1	No			1WAY
5	2-3-1-1	1-3-1-1	VT1	No			1WAY
6	2-3-1-3	1-3-1-3	VT1	No			1WAY
7	1-2	2-2	STS1	No			1WAY
8	2-2	1-2	STS1	No			1WAY
<div> <div>Close</div> <div>Help</div> </div>							

Figure 33

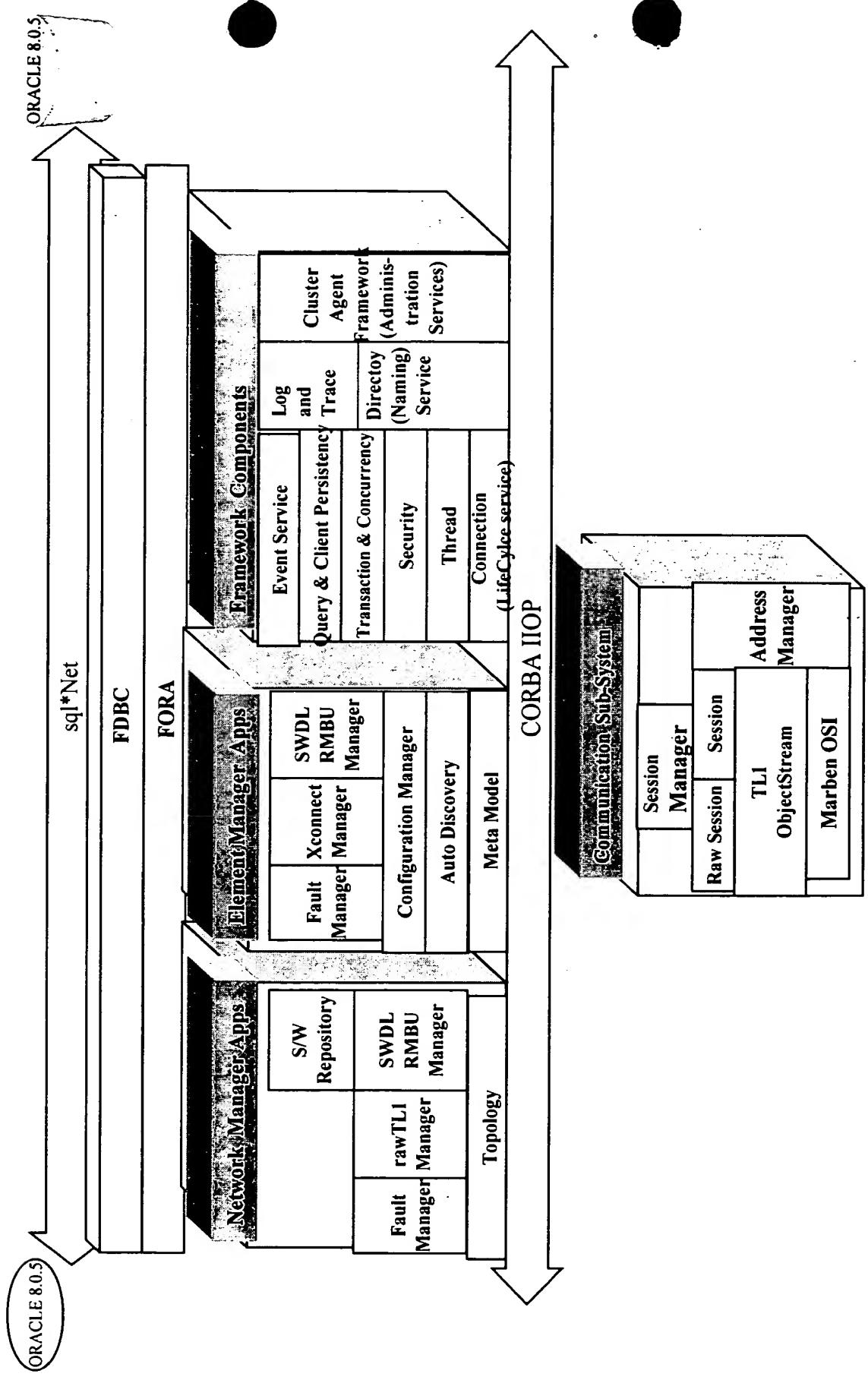


Figure 34

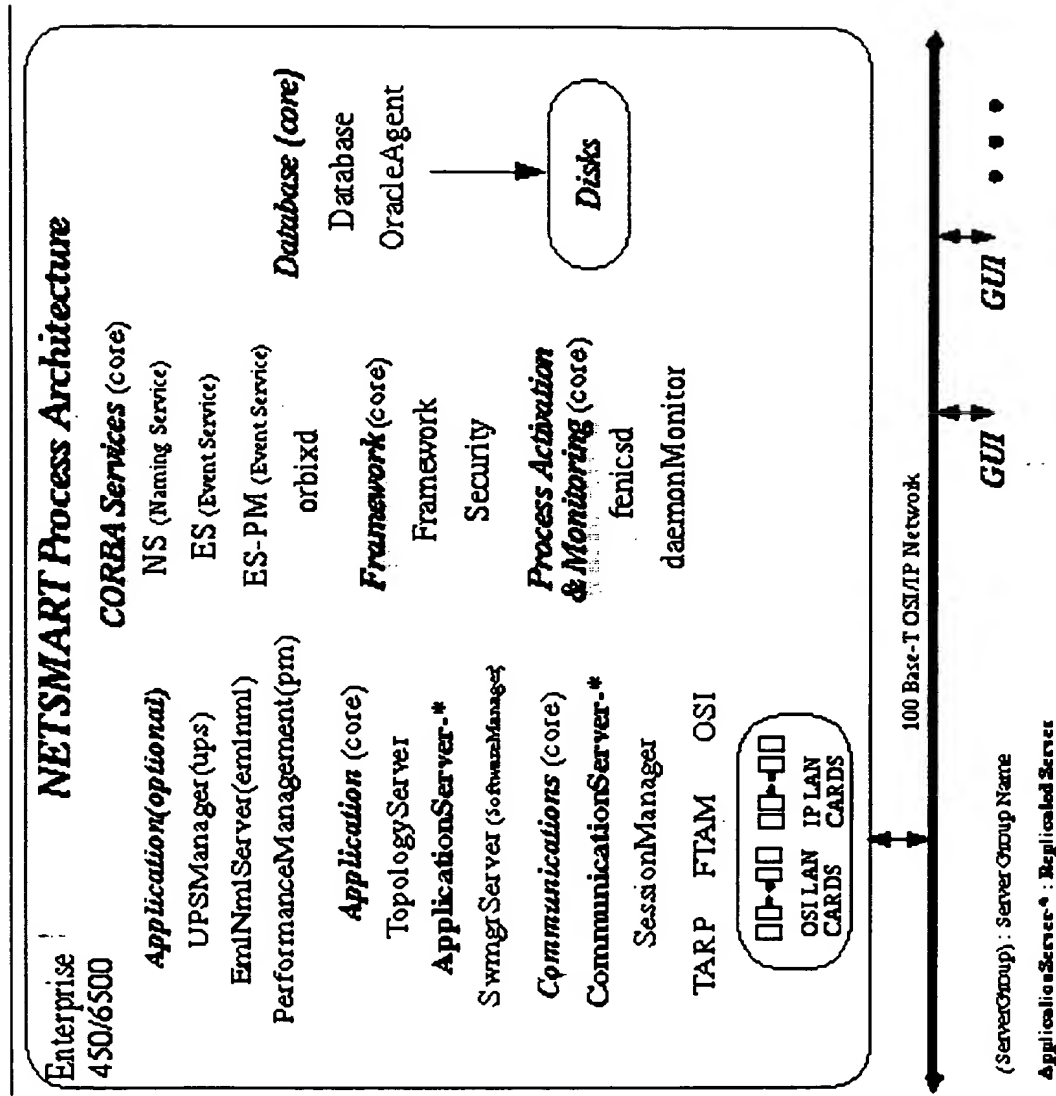


Figure 35

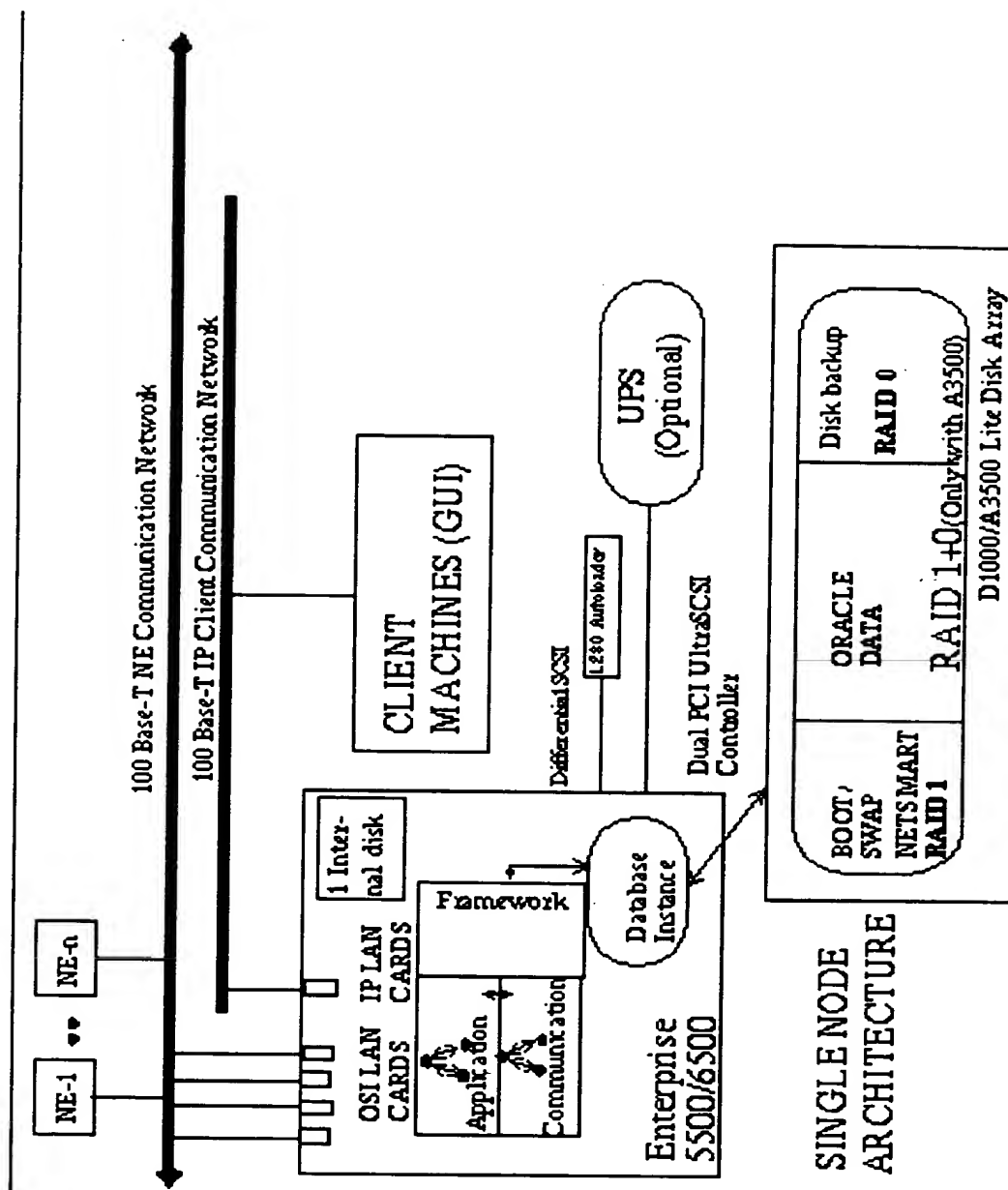


Figure 36

NETSMART Server Architecture

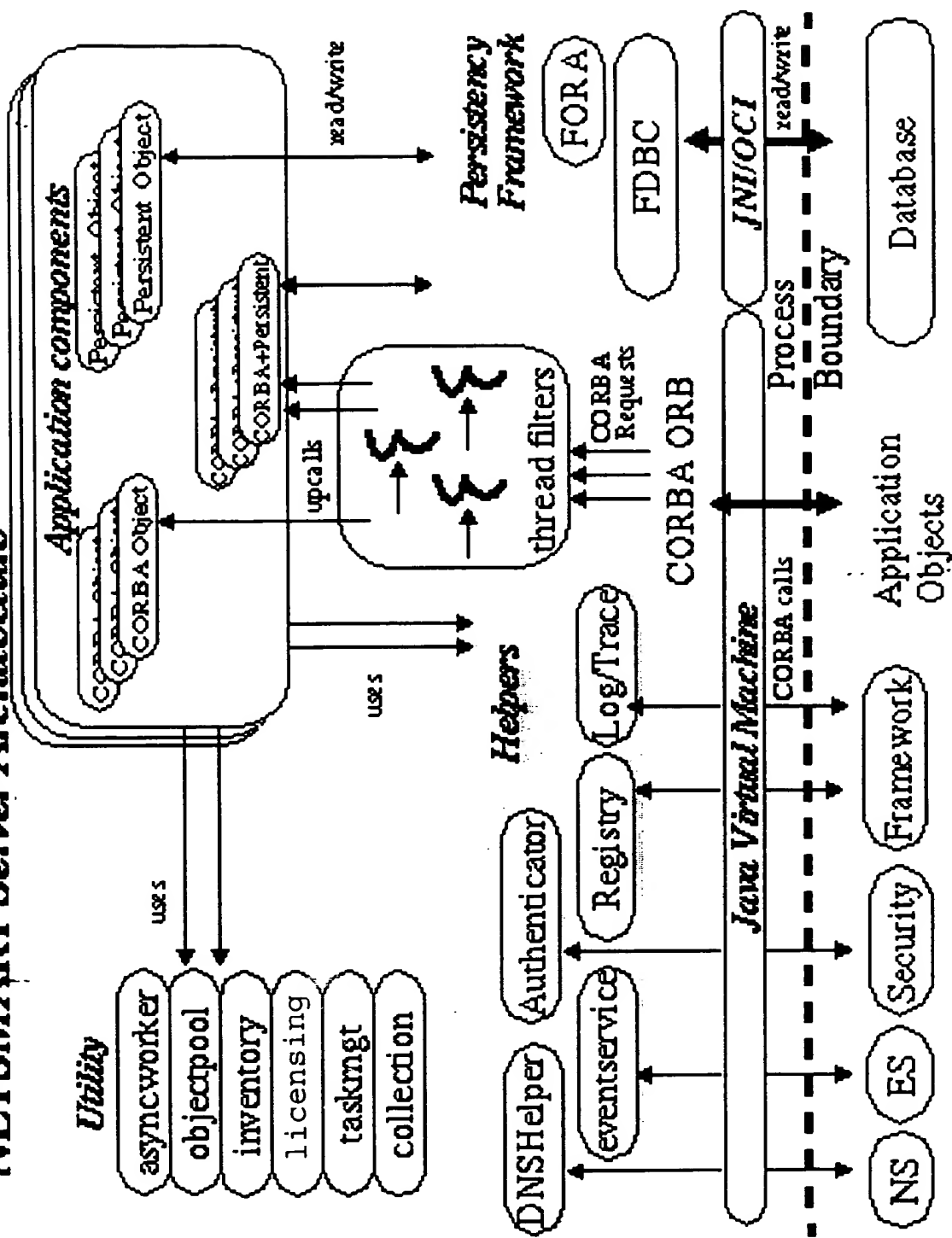


Figure 37

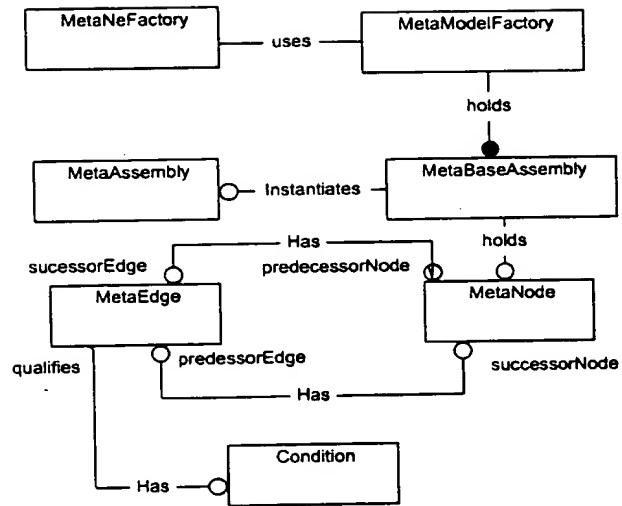


Figure 38

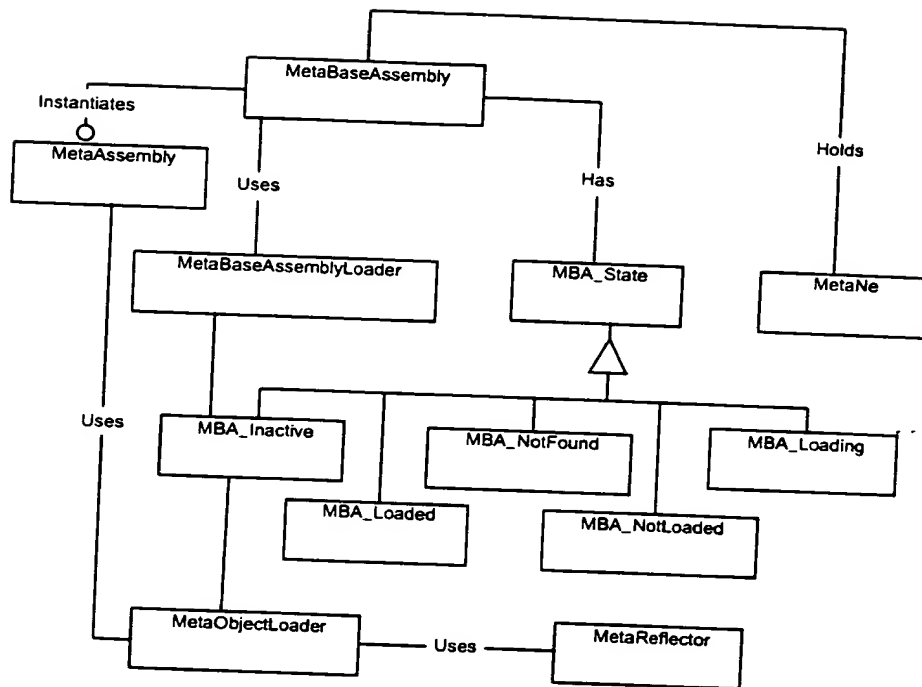


Figure 39

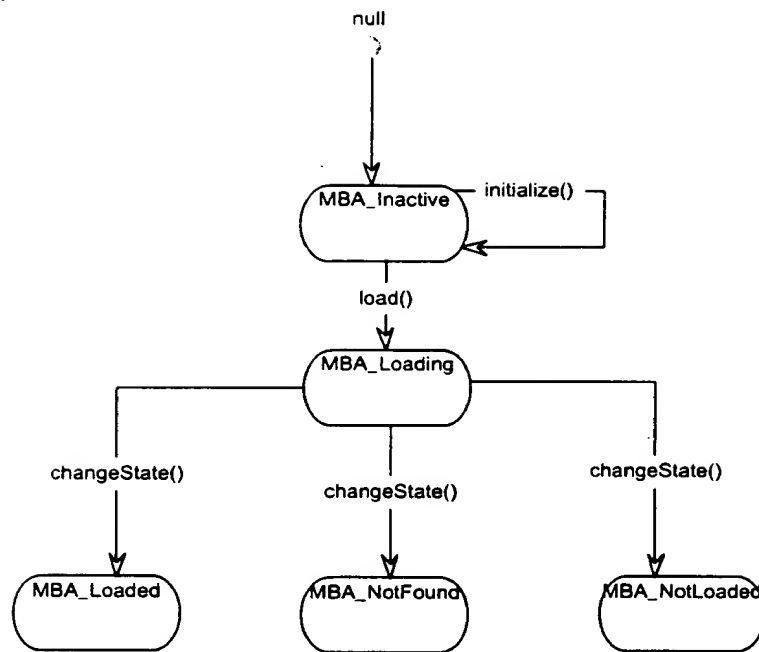


Figure 40

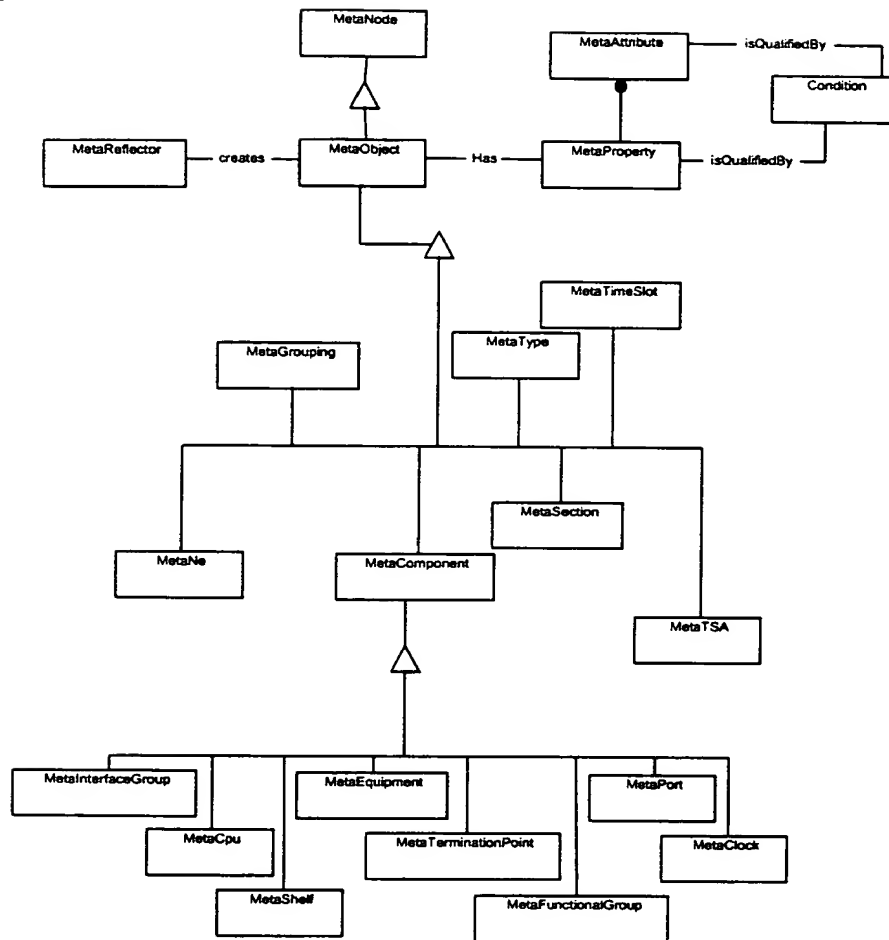


Figure 41

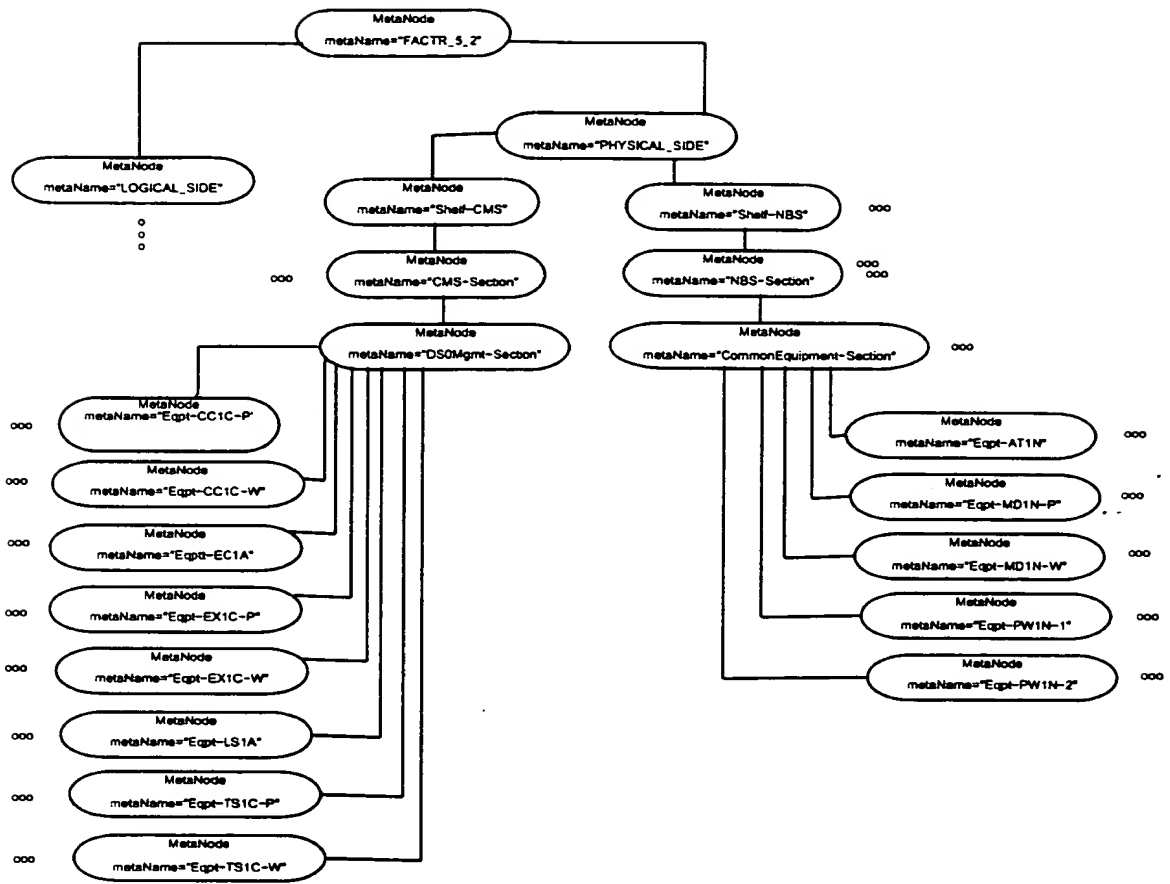


Figure 42